

What is claimed is:

1. A switch comprising:

first, second and third beams arranged with constant spacing one from another; and

voltage applying means for providing a direct current potential to the first, second and third beams and applying a driving force to the first, second and third beams.

2. A switch according to claim 1, wherein, when turning on the switch, the voltage applying means generates a drive force between the first beam and the second beam thereby placing the first beam and the second beam into a contact and electric coupling while, when turning off the switch, a drive force is caused between the second beam and the third beam thereby isolating between the first beam and the second beam.

3. A switch according to claim 1, wherein the first, second and third beams are arranged with a spacing satisfying a predetermined isolation.

4. A switch according to claim 2, wherein the voltage applying means is to apply a direct current potential to the first, second and third beams for a predetermined time.

5. A switch according to claim 2, wherein the third beam is moved after electric coupling between the first beam and the second beam.

6. A switch according to claim 1, wherein the beam is changed in a spring constant by changing a shape of the beam.

7. A switch according to claim 1, wherein the second beam is made smaller in shape as compared to the first and third beams.

8. A switch according to claim 2, wherein the second beam is made smaller in shape as compared to the first and third beams, and, in a state the first and second beams are electrically coupled together, the third beam is applied by a drive force from the first beam and the third beam is moved toward the first and second beams.

9. A switch according to claim 2, wherein, when the first and second beams are electrically coupled together, the first beam and the second beam are switched in potential each other, to cause a drive force on the third beam.

10. A switch according to claim 2, wherein a drive force is not caused on the third beam and the third beam is not moved.

11. A switch according to claim 1, wherein the first beam is connected to an antenna end, the second beam is connected to an input terminal and the third beam is terminated at a predetermined resistance value.

12. A switch according to claim 2, when turning off the switch, said second beam and the third beam are previously placed in contact.

13. A switch comprising a group of switches, said group of switches is formed by arranging a plurality of switches according to claim 1 in parallel.

14. A switch according to claim 1, wherein any of the first, second and third beams is formed of a metal.

15. A switch according to claim 1, wherein the first, second and third beams are arranged horizontally, any of the first, second and third beams are to move horizontally.

16. A switch according to claim 1, wherein the first, second and third beams are arranged vertically, any of the first, second and third beams are to move vertically.

17. A switch according to claim 11, wherein capacitances are arranged between the first beam and the antenna end and between the second beam and the input terminal.

18. A switch according to claim 1, wherein the switch is to be operated in a vacuum or in an inert gas.

19. A switch according to claim 13, wherein said group of switches is formed by arranging a plurality of switches in the number symmetrically about the antenna end.

20. A switch according to claim 1, wherein adjacent two or three of the first, second and third beams are bent in a same shape.

21. A switch according to claim 20, wherein any of the first, second and third beams is made in an S-form.

22. A switch according to claim 20, wherein any of the first, second and third beams is different in thickness from an adjacent one thereof.

23. A switch according to claim 1, wherein the drive force

is an electrostatic force.

24. A switch according to claim 1, wherein the switch is formed by a semiconductor process.

25. A switch comprising:

an electrode arranged on a substrate;

a movable electrode to contact with the electrode and has as a constituent element a movable member having an internal stress to vary depending upon a voltage applied;

first voltage applying means for causing an electrostatic force at between the electrode and the movable electrode; and

second voltage applying means for applying a voltage to the movable member.

26. A switch according to claim 25, wherein the movable member is structured of a polymeric gel.

27. A switch according to claim 25, wherein the movable electrode is structured by forming a conductive material on a surface of the movable member.

28. A switch according to claim 25, wherein, when turning on the switch, the first voltage applying means generates an electrostatic force between the movable electrode and the electrode and the second voltage applying means applies a control voltage to the movable member such that a spring constant of the movable member is minimized while, when turning off the switch, the second voltage applying means applies a control voltage to the movable member such that the spring constant

of the movable member is maximized to put off the electrostatic force due to the first voltage applying means.

29. A switch according to claim 25, wherein the switch is formed by a semiconductor process.